UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,661	12/31/2003	Ronish Patel	BP3003	4552

7590 09/13/2005

Robert A. McLauchlan
P.O. Box 150727
Austin, TX 78716-0727

EXAMINER	
LY, NGHI H	

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/749,661	PATEL ET AL.	
	Examiner	Art Unit	
	Nghi H. Ly	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,8-19,21,23-33,35 and 37-43* is/are rejected.

7)☒ Claim(s) *5,7,20,22,34 and 36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 10-41 have been renumbered 12-43, respectively (claims 10 and 11 have been claimed twice).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6, 8-10, 12, 14-19, 21, 23-25, 28-33, 35, 37-39, 42 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Eaton et al (US 5,507,040).

Regarding claims 1, 16 and 30, Eaton teaches a method to determine when a wireless terminal has been paged by a servicing base station (see Abstract and column 3, lines 3-15), the method comprises: receiving an encoded paging burst on a paging channel (column 1, lines 3-32, see "encoded", column 2, lines 25-47 and column 4, lines 27-62, see "decoder", Eaton inherently teaches "encoded paging burst"), decoding the

encoded paging burst to produce a decoded paging burst (see column2, lines 25-47 and column 4, lines 27-62), determining that the decoded paging burst contains a null page for the wireless terminal (see column 3, lines 15-32 and column 8, lines 27-43), processing the encoded paging burst to produce a null page pattern (see column 8, lines 27-43), entering a sleep mode for a sleep mode period (see Abstract and column 1, lines 9-13) awakening from the sleep mode to receive an additional encoded paging burst on the paging channel (also see Abstract and column 1, lines 9-13), processing the additional encoded paging burst to produce a processed encoded paging burst (column2, lines 25-47 and column 4, lines 27-62, see "decoder", Eaton inherently teaches "encoded paging burst" and see column 3, lines 15-32 and column 8, lines 27-43), comparing the processed encoded paging burst to the null page pattern (see column 8, lines 27-43), and when the comparison is favorable (see column 8, lines 27-43), determining that the additional encoded paging burst is a null page (see column 3, lines 15-32 and column 8, lines 27-43, the teaching of Eaton inherently teaches "determining that the additional encoded paging burst is a null page". In addition, Applicant's specification page 14, [0036] discloses that the null page pattern is "soft decisions", and Applicant's specification page 4, [0009] discloses that each soft decision of the null page pattern corresponds to a soft decision that is within the process encoded paging bursts. Eaton teaches the determination between "on-signal data rate" and "off-signal data rate" see Eaton's Abstract and column 8, lines 27-43, and Eaton also teaches "encoded" (see column 1, lines 3-32), and data rate depends on the

encoding scheme. Therefore, Eaton inherently teaches "encoded paging burst" or "null page pattern" as claimed).

Regarding claim 2, Eaton further teaches comprising reentering the sleep mode upon the favorable comparison (Abstract and column 8, lines 27-43, see determination between "on-signal data rate" and "off-signal data rate").

Regarding claim 3, Eaton further teaches the additional encoded paging burst comprises radio frequency bursts, and wherein when a comparison of a first RF burst is unfavorable, a comparison of a subsequent RF burst is made, wherein if comparisons of the RF bursts are unfavorable, the additional encoded paging burst is decoded to produce a processed encoded paging burst (Abstract and column 8, lines 27-43, see determination between "on-signal data rate" and "off-signal data rate").

Regarding claims 4, 6, 19, 33 and 35, Eaton further teaches the null page pattern comprises a bit pattern and the processed encoded paging burst comprises a plurality of soft decision bits (Abstract and column 8, lines 27-43, see determination between "on-signal data rate" and "off-signal data rate").

Regarding claims 8, 15, 29 and 43, Eaton further teaches processing the additional encoded paging burst includes at least equalizing the additional encoded paging burst to produce a plurality of soft decision bits (Abstract and column 8, lines 27-43, see determination between "on-signal data rate" and "off-signal data rate").

Regarding claims 9, 24 and 38, Eaton further teaches the comparison is unfavorable, assuming that the wireless terminal has been paged (Abstract and column 8, lines 27-43, see determination between "on-signal data rate" and "off-signal data

rate").

Regarding claims 10, 25 and 39, Eaton further teaches the comparison is favorable when the processed encoded paging burst and the null page pattern meet a similarity threshold (Abstract and column 8, lines 27-43, see determination between "on-signal data rate" and "off-signal data rate").

Regarding claim 12, Eaton further teaches the wireless terminal awakens from the sleep mode at the expiration of a sleep mode period to receive as least one paging burst (see column 1, lines 15-22).

Regarding claims 14, 28 and 42, Eaton further teaches determining an encoding process employed by the servicing base station for the paging burst, and re-encoding the decoded paging burst using a determined encoding process to produce the null page pattern (column 1, lines 3-32, see "encoded").

Regarding claims 17 and 31, Eaton further teaches during the second time period, the RF front end, the baseband processor (see fig.2, microcomputer 41), and the CODEC processing module are operable to reenter the sleep mode upon the favorable comparison (see column 8, lines 38-43).

Regarding claims 18 and 32, Eaton further teaches during the second time period, the CODEC processing module is operable to, when the comparison is unfavorable, decode the processed encoded paging burst (see fig.2, decoder 55).

Regarding claim 21, Eaton further teaches the null page pattern and the processed encoded paging burst each comprise a plurality of soft decision bits (see column 1, lines 3-32 and "encoded" and see column 3, lines 15-31).

Regarding claims 23 and 37, Eaton further teaches the baseband processor (see fig.2, microcomputer 41) is operable to equalize the additional encoded paging burst to produce a plurality of soft decision bits (see column 1, lines 3-32 and "encoded" and see column 3, lines 15-31).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 11, 13, 26, 27, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eaton et al (US 5,507,040).

Regarding claims 11, 26 and 40, Eaton teaches the wireless terminal sleep for 16.67 ms (see column 7, lines 44-49). Eaton does not specifically disclose the sleep

mode period ranges between about 0.5 second to about 2.0 seconds. However, such ranges of second could have been determined by the inventors' need e.g., use a range of second so that maximum power may be saved during the operation.

Regarding claims 13, 27 and 41, Eaton teaches the wireless terminal (see fig.1, items 10). Eaton does not specifically disclose the wireless terminal operates according to the GSM standard. However, the examiner takes Office Notice that such feature as recited is very well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teaching of Eaton for providing a method as claimed, for providing GSM standard.

Allowable Subject Matter

7. Claims 5, 7, 20, 22, 34 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 5, 7, 20, 22, 34 and 36, Eaton teaches claims 1, 16 and 30. Eaton fails to teach comparing the processed encoded paging burst to the null page pattern comprises comparing each bit of the null page pattern to a corresponding soft decision bit of the processed encoded page burst to produce a plurality of comparisons, when the number of comparisons exceeds a comparison threshold, determining that the additional encoded paging burst is a null page.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Darabi (US 6,931,267) teaches bias filtering module including MOS capacitors.

b. Bennett (US 6,697,649) teaches peer-to-peer communication in a radio network.

c. Cannon (US 6,678,537) teaches adjustment of period of real-time slow drift correction of alignment of handset's local oscillator for a cordless telephone.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

09/01/05

Marsha D Banks-Harold

MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600